Pellagra, when uninfluenced by treatment, is subject to periodic exacerbations—so is syphilis, though it does not manifest the seasonal variations of pellagra.

Pellagra causes first an exaggeration and later a loss of certain reflexes, notably the patellar,—so does syphilis.

Pellagra leads to marked degeneration of the central nervous system, causing incoordination of motor nerves as well as a terminal insanity—so does syphilis.

Pellagra exhibits marked tendency to relapse after apparent cure—so does syphilis.

Pellagra in its acute form, especially the so-called typhoid form, shows pronounced and almost immediate improvement under the administration of the newer arsenical preparations, and that irrespective of the dietary, insofar as I have been able to observe—and so does syphilis.

Pellagra is not so easily influenced by this form of medication after the central nervous system becomes involved—neither is syphilis, because the invading organism has gotten beyond the reach of the drug.

Form this analogy I contend that there may be a relationship between the etiology of pellagra and that of syphilis, and I hold to the opinion that pellagra is caused by some as yet unrecognized protozoon, and I base this opinion on:

1. The observations of Sambon.

2. The observations of the Thompson-McFadden Commission, which indicated the communicability of pellagra, though they did not especially hold out for the protozoon nature of the infection.

3. The close analogy existing between pellagra and syphilis, the latter being of known protozoon origin.

4. The fact that pellagra may be favorably influenced by anti-protozoon medication, irrespective of diet.

MALINGERING; ITS DIAGNOSIS AND SIGNIFICANCE.*

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Malingering is the act of knowingly pretending the presence or the absence of disease; of knowingly causing disease; or of knowingly protracting an existing disease; the disease being referred to the person himself.

EXAMPLES FOLLOW.

1. Patient claimed that exposure to draught in shop was followed by chilliness, and development of a rash all over the body. Syphilis was indicated. He denied exposure and genital sore. Examination of penis showed large sclerotic scar; and Wassermann was positive. This patient was a malingerer in that he pretended the absence of disease.

2. A patient complaining of headache which he knows is non-existant, is a malingerer because he pretends the presence of disease.

3. A person producing a diarrhoea by means of violent purgation, in order that he may be thought ill, is a malingerer because he has caused disease.

4. He who wilfully neglects to carry out orders for treatment is a malingerer, because he may protract existing disease.

Cases of out and out malingering are exceedingly rare; but cases in which there is a larger or smaller element of malingering are very, very common. Many a wife malingers a little, that she may receive sympathy from her husband. A love-sick girl causes her sweetheart to return to her, after a quarrel, by the timely occurrance of a headache, or the like. Many of our street beggars are malingerers. In private practice the condition is rarely seen, except in the case of the woman who claims tuberculosis in order that an abortion may be done; the user of morphine who furnishes the most varied complaints in his plea for medication; and the pregnant woman who has carefully memorized the typical history of a fibroid and seeks to have "it" removed.

An acquaintance with malingering is most important; and at this particular time for three main reasons; and they increase in importance in the order given.

1. Municipal and other charitable hospitals attract malingerers, and the wards of these institutions must be kept active.

2. With the advent of more and more legislation along the line of Workmen's Compensation, Employer's Liability and Social Insurance the doctor will be brought in touch with a greater and greater number of patients who will malinger, and

3. At this time of most vital importance; men will malinger against enlistment into the service of their country; and soldiers of this type, having enlisted, will seek to avoid duty.

As an example of the indigent who malingers in order to remain in a free hospital, the following case is cited:

Case A.: Patient admitted to the San Francisco Hospital because of pains in various joints. One knee had been swollen previously. There were at no time any local objective signs of joint disturbance; there were neither fever or leukocytosis. The patient was, however, completely worked up with the result that the only positive diagnoses were slight disturbance in a couple of teeth, and a slight anemia. Teeth were attended to and medication given for the anemia, but the joint complaints were still present after three or four weeks. On explanation to the patient that there was absolutely no cause for joint pains, they disappeared gradually, but there coincidently developed a rash. Latter was distributed on front of thighs, on left arm, and on left shoulder and consisted of easily recognizable scratch marks, none of which were out of the reach of her right hand. Patient overheard discussion as to the nature of these lesions and immediately assumed a typical attitude of defense. She gave up all her complaints and from then on, insisted simply that she had no place to go when she should leave hospital. The social status is usually the basis of malingering in these individuals; and the workers

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in social service must take the burden of eliminating these pretenders after they have been recognized.

As regards insurance; it has been the experience abroad and in this country, that with the carrying into effect of legislation for Workmen's Compensation and the like—the number of non-fatal accidents, the number of days of incompetency following, and the number of complications due to accidents in the industries—have rapidly risen. Formerly, a workman, realizing that he must get back to work in order to provide for himself and his family, had no inclination to delay things; but today he is sometimes better off when "sick" than well. For example:

Case B.: Caught arm in machine two years ago. At the time was making $90 per month. Had an operation to repair the superficial tissues of right arm: there remained a scar about four inches long across anterior surface of right forearm. He was given compensation of $25 per month and a job as watchman at $75 per month. Since that time he says he has had pain and anesthesia below scar and contracture of fingers of right hand; says he cannot open latter. Fingers were involved gradually and in succession from little finger toward thumb. Has seen fifteen doctors; had another operation in which it was proven the scar did not include the flexor tendons. When last seen, claimed the index finger had become completely flexed during the last few weeks, and was now immovable and that the thumb would probably follow. The following contradictions in his complaints and actions show that in certain respects he was a malingerer; in a measure also, a method of attack for detecting contradictions is outlined.

When asked to move right index finger, patient said: "I could not move that finger if it would save my life—if this house were on fire—if you placed $10,000 there before me, etc.," and so saying he kept his right index finger in almost complete flexion. But under the pretence of being a fellow patient, he had been seen, by the writer, to use his right index finger, alternately flexing and extending it, as he undressed; and was seen to quickly place it in "permanent" flexion when Dr. T. (whom he knew to be his examining physician) entered.

When Dr. T. extended the fingers of the patient's right hand the latter said: "If you had the excruciating pain I have, you would jump through the ceiling." But, during this "pain" there was no increase in pulse rate, nor change in facial expression indicating pain.

With his eyes closed, when his left arm was touched with a warmed forceps, he said: "That's so sharp it burns" and when his right arm below the scar was touched, "you didn't touch me." But, he denied having any feeling in the latter area, and should not have known when to say "you didn't touch me," as stimulation was not applied in rhythmic succession.

Having forced open his hand and placed a handkerchief under the fingers, he removed handkerchief, and his attention being diverted he kept all of his fingers partially extended. But he had said they were always flexed so as to approximate themselves to palm.

He was supposedly insensitive to pin pricks in certain area below scar, but when Dr. T. left room the pin pricks in the "analgesic" area were the source of much annoyance.

Said he had "grit to bear jabs of pin in the dead area" but it requires no grit to bear pain in an analgesic area.

Says the index finger is now going through the stage other three fingers have finished and that thumb will probably follow in two months. Observation showed two sorts of habits for this index finger, the normal when patient thought he was not being watched and the deliberately assumed when examination was being conducted. Evidence pointed to a diagnosis of malingering as regards both the contractures in fingers and the sensory disturbances in arm.

It is indeed a pity that malingering should be resorted to in an attempt to avoid service to one's country. The psychology of malingering is not yet clearly understood, but the physician today may play his part if in addition to making himself ready to recognize the simulator, he will take a most firm stand and not be a party to a faked illness; and above all, never when it would hurt his country. There has been an abundance of malingering in the great war. Ten cases of simulated appendicitis have followed three real cases in a week; there has been picric acid jaundice; scratched urethras and injections of canned cream to fake gonorrhea; coal oil injections for plegmons; self-inflicted wounds; vesicants rubbed into skin for dermatitis; Russians have, with instruments, stretched the inguinal rings to produce hernia; white of egg has been injected into bladder for albuminurea; temperatures have been raised by having hot water in mouth just before reading, shaking mercury toward higher readings and by friction with the tongue; even known tuberculous sputum has been passed along and placed in fellow patients' sputum boxes. Medical men must muster all of knowledge and skill that they may detect accurately and quickly any of these demoralizing practices.

This paper is, therefore, a plea, that recognizing the significance of malingering, especially at this time, each and every case shall have a complete history, must receive a most complete examination, have all indicated laboratory investigations, and the opinions of every specialist for whom an indication may appear. A thorough knowledge of malingering presupposes a thorough knowledge of anatomy, physiology and pathology; and of clinical medicine, surgery and the specialities. This communication will attempt to point out only some of the broader considerations of malingering, not concerning itself with the specialties nor with detail.

The malingerer most often includes in his complaint, symptoms referable to the nervous system and for the purpose of this discussion patients will be regarded as: 1. Those having organic disease;

TABLE 1.

	Functional Disease and Malingering	Organic Disease.
Complaints,	always disabling,	not necessarily disabling.
Syndromes,	all atypical, vary from time to time, no anatomic basis,	tend to be typical, fairly constant, maybe progressive. anatomic basis.
Mental Condition and Attitude	may not desire to get well, maybe resistance to getting well, tend to simulate, defective health conscience, exaggeration of symptoms, statements not reliable, may take up an impossible symptom when suggested to them.	no tendency toward these.
	(in case of head injury may remember events right up to and right after accident)	usually amnesia of events immediately before and after accident.
Reaction of degeneration,	absent,	maybe present (depending on lesion),
Muscle Atrophy,	maybe, from disuse,	maybe, organic.
Flaccidity,	maybe, without wasting,	with wasting.
Contractures and Spasticities,	may disappear under chloroform,	do not disappear under chloroform.
Tremor,	maybe, usually accompanied by dyspnoea and tachycardia.	maybe; has accompaniments, as of multiple sclerosis.
Sensory Disturbances,	may include mucosae, do not follow anatomy, areas vary, areas may be sharply delimited at mid-line.	usually do not. in segmental, root or peripheral nerve areas. areas tend to remain constant. usually are not.
	PAIN, usually no accompanients except "faces" and wiggling, etc.,	usually accompanied by, changes in pulse rate especially increase, general restlessness, characteristic facies, flushing or pallor of face, change in blood pressure especially rise, and dilatation of the pupils.
	PAIN, over long period may not lessen appetite, nor weight.	always leads to loss of sleep, appetite, and weight.
True Incontinence,	never,	maybe, if proper lesion.

TABLE 2.

Malingerer.	Hysteric.
Knows lesion to be false,	Believes lesion true.
Lesion more disabling,	lesion less disabling.
Hesitates,	answers without hesitation.
Contradicts self,	not nearly so marked.
Gets confused,	not same tendency.
Indefinite,	definite.
Attempts to conceal number of sources of benefit,	not usually.
Maybe, can't look examiner in face,	can do this.
Exaggeration conscious,	exaggeration unconscious.
No changes in sexual self,	changes in sexual self, maybe.
Shrinks before he is touched,	awaits definite testing.
"Starvation," but daily urine and stool!	Starvation with appropriate symptoms and signs.
"Yes-no-pin-test" maybe present,	absent.
(Have patient close eyes. Tell him quickly that you are going to prick him with pin, and to say "yes" when he feels it, and "no" when he does not. The malingerer frequently says "no" when he is touched in an area which he claims is analgesic!)	
Electrode test positive,	electrode test negative.
(Use faradic current. Have break key in one electrode. Suppose patient claims a tender area in back; apply current to various portions of back, and having the coil still humming, shut off current in electrode and touch tender area. Frequently malingerer in his confusion answers that the "current" hurts him here more than in other areas.)	
Mapped out areas of sensory disturbances, may differ markedly at different examinations	Differ very little on repeated examination.
"Limitation" of movements of spine, etc., not constant.	More constant.
Sensory disturbances anywhere,	Tend to be glove-like.

2. Those with non-organic or functional disease, and 3. Those with no disease, the malingerers.

It is convenient, first, to differentiate organic disease on the one hand, from functional disease and malingering on the other, as the latter have much in common.

And, in addition, these signs must have an organic basis: Argyl-Robertson pupil; unequal pupils (synechiae, etc. having been excluded); optic neuritis; persistant fast or slow heart; and a positive Wassermann or other positive laboratory findings. If patient's attention has been distracted, without doubt, and a Romberg is present, it is a sign of organic disease.

The table above shows that malingering has much in common with functional nerve disease, and that with it, it may be differentiated from organic disease. It then becomes necessary to differentiate malingering on the one hand, from hysteria, neurasthenia, psychasthenia and the traumatic neu-

roses on the other. The psychasthenic is rarely a conscious simulator. Traumatic neuroses are usually combinations of neurasthenic and hysteric symptomatology. The neurasthenic has many symptoms without organic basis, but his usual truthfulness is a good differential point. It is the differentiation of hysteria and malingering that is most difficult. The two conditions are, of all the non-organic conditions, most closely related. The table above shows many things they have in common; the hysteric tends on top of his hysteria to become a malingerer; if the malingerer simulates fits, they resemble hysterical ones. The following table, however, brings out certain of the differences.

So much for differentiation; but a warning. One must be thorough in investigation; avoid bias toward sympathy on the one hand, or harshness on the other, as examinations proceed. The final opinion must be honest; it must be firm. Every effort to gain information must have been used before branding a man a malingerer. For example:

Case C.: Woman, age 42 years, began to have malaise, irritability and crying spells, some slight gastric upsets and occasional constipation. One of the best clinicians in San Francisco, said: "Entire examination being negative, excepting a very slightly enlarged liver, I am looking on the case as one of nerve fag more than anything else and have prescribed accordingly." Symptoms, however, continued, and newer investigations disclosed a carcinoma of the cervix uteri, which was operated upon immediately.

Case D.: Patient in San Francisco Hospital. Numerous vague and varied complaints. After three months' investigation, nothing more than "flat feet" had been diagnosed. Patient was discharged as a malingerer. Returned after one month with same symptoms and visiting physician reported "very, very small amount of fluid in each chest and in abdominal cavity." Tapping of right pleural cavity and of peritoneal cavity gave specimens which on injection into guinea pigs produced tuberculosis.

As a sort of summary, it is useful to keep the following in mind:

STATUS.

Is patient being benefited by appearing ill? What insurance and compensation is there coming to a lodge member or working man when ill? Is the patient making more when sick than well? It must be kept in mind that by malingering, the underfed may eat; the hard worker may loaf; beggars make easy livings; the morphine user gets his medication; the indigent gets hospital care; and the soldier may be freed from duty.

FAMILY HISTORY.

Look for other neuropaths.

GENERAL CHARACTERISTICS.

Usually the malingerer is a neurotic, introspective, imaginative, pessimistic, hesitating, contradicting, confused, suspecting, indefinite, calculating, exaggerating individual; with a very disabling complaint and a very loquacious vocabulary to describe it; and he insists on looking at his lesion while he talks of it, of liability, the shame of his being out of work and the like.

HISTORY.

Brings out atypical, inconsistent syndromes without anatomic or physiologic basis, and possibly the fact that the patient has not sought the best treatment, or having received expert advice, has not carried it out.

EXAMINATION.

Patients must be stripped. Examination must be most thorough. A man, undressed, has concealed a colotomy wound, made because of a rectal carcinoma,—by placing his hands on his hips and talking and laughing during his examination.

Have him observed while he undresses, through a concealed opening in a wall, a periscope, or better by another doctor or nurse. Divide his attention in an effort to get valuable signs and contradictions. This may be done at times by playing on his emotions, especially his characteristic ones. Record accurately and on different occasions the areas in which he complains of sensory disturbances, also the limits of joint motion. Have patient blindfolded for these examinations. The method of D'Arcy Power of using stereoscopic photography for permanent records is very valuable here. Try the yes-no-pin-test and the electrode test; or during a chest examination press stethoscope over supposedly tender areas without pain.

LABORATORY.

Either positive or negative evidence here is most valuable.

SPECIALISTS.

If malingering is suspected in the field of a specialist, appropriate consultation should always be called.

THERAPEUTIC TESTS.

Use of dark room and nauseating drugs; and the forbidding of reading and of visitors may verify a diagnosis.

In all investigations the potential disease must be kept in mind, just as definitely as the actual one. There must be recognized the aneurism that may rupture; the syphilis that may involve the nervous system; the tuberculosis that awaits trauma to locate itself; the neuropath who may become neurasthenic, and so forth: for the malingerer may find it advantageous to blame his new environment for his old complaints.

To conclude, the significance of malingering must be realized. It is a duty that physicians owe the State, insurance companies, employers and workmen and themselves; but most of all today—their country. A thorough knowledge of malingering is one of the vital pieces of equipment of the medical man as he serves his country in this war.